Molecular Wiring of Semiconductor Quantum Dots

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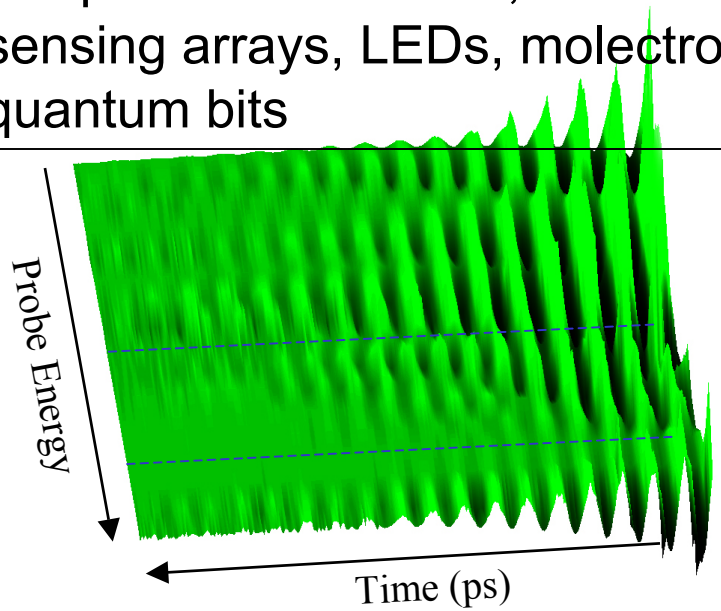
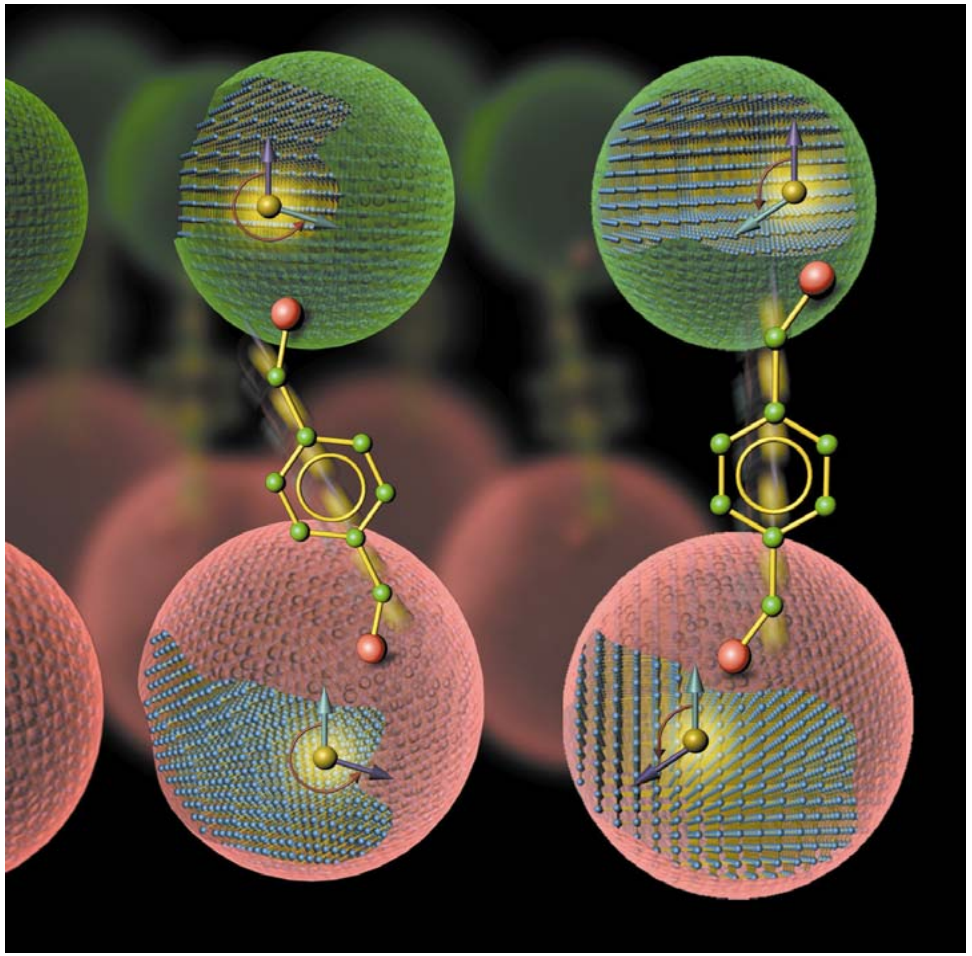
- chemical assembly of organic-inorganic nanostructures for semiconductor spintronics and quantum information processing.
- efficient room temperature "shuttling" of coherent electron spins between quantum dots through molecular bridges
- impact on solar cells, chemical sensing arrays, LEDs, molectronics, quantum bits





- *Science* News Story, July 2003
- *Science* **301**, 1074 (2003).

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Education:

Undergraduates:
Lea Fredrickson, Carly Kopecky

Graduate student:
Jesse Berezovsky.
Jesse is a NSF Fellow, a UC Regents Scholar, and a California Nanosystems Institute Fellow.

Postdoctoral student:
Min Ouyang
Min was a PhD student at Harvard in Chemistry, and joined the UCSB Physics program as a NSF-sponsored CNSI Fellow.

Outreach:

Online web information provided detailing full chemical synthesis steps and physical measurements.

Results featured as a News Story by Science a month before publication.

Accomplishments highlighted in Physics Web (Europe) August, 2003, and Photonics Spectra (2003).